



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX**

75 Hawthorne Street
San Francisco, CA 94105

Via Electronic and U.S. Postal Service Mail

July 29, 2011

Steven A. Samuel
Vice President and General Counsel
AmeriGas Partners, LP
460 North Gulph Road
King of Prussia, Pennsylvania 19406

Re: Polychlorinated Biphenyls – USEPA Conditional Approval of July 11, 2011 “*Final Risk-Based PCB Disposal Approval Application Former Petrolane-Lomita Gas Plant*” Under Toxic Substances Control Act, 40 CFR 761.61(c)

Dear Mr. Samuel:

Thank you for submitting the “*Final Risk-Based PCB Disposal Approval Application Former Petrolane-Lomita Gas Plant 2851 Orange Avenue Long Beach California EPA ID No. CAR000214189*,” dated July 11, 2011 (Application) and prepared by Environmental Partners, Inc. (EPI) on behalf of AmeriGas. The Application is for a risk-based cleanup of polychlorinated biphenyls (PCBs) at the Petrolane Cleanup Site (defined in Section A.4 of this letter) located within the former 7.74-acre Petrolane Lomita Gas Plant (Site) consistent with the Toxic Substances Control Act (TSCA) regulations in 40 CFR 761.61(c).

The U.S. Environmental Protection Agency Region 9 (USEPA) is hereby approving the Application with conditions. USEPA believes that implementation of the PCB cleanup proposed in the Application will not pose an unreasonable risk of injury to health and the environment if the Application and the cleanup approach contained therein are implemented as modified by the conditions of approval and the clarifications in Sections A.4 and B of this letter, respectively. This approval is effective on the date of this letter.

AmeriGas has submitted the Application to replace the cleanup plan in the AmeriGas July 26, 2010 Notification (40 CFR 761.61(a) self-implementing cleanup) and the August 19, 2010 sampling and analysis plan; and the Application is based on characterization data collected prior to and under USEPA’s September 8, 2010 approval of the Notification. The cleanup plan in the Notification requires that analysis results for each soil verification sample be compared to the 0.22 milligram/kilogram (mg/kg) PCB cleanup level established by USEPA in the September 2010 approval. AmeriGas has sought flexibility on this matter and has proposed in the risk-based Application to calculate an exposure point concentration(s) based on the cleanup verification data via USEPA’s ProUCL statistical program for comparison with the 0.22 mg/kg PCB cleanup level to determine compliance with this cleanup level.

A.1 Facility Status

AmeriGas currently owns the 7.74-acre Petrolane property (Site) that operated from the 1920s until 2007 as a natural gas processing and compression facility. The property is currently vacant, all building structures have been demolished, and all the gas plant equipment has been removed from the Site. PCB-containing equipment and PCB remediation wastes generated during demolition and PCB characterization activities have been disposed of at the U.S. Ecology facility in Beatty, Nevada. The current land use for the Site is medium industrial

and the future land use may be commercial and / or industrial. The City of Long Beach owns about 45 acres of land zoned as recreational and that land abuts the western and southern boundaries of the Site.

A.2 TSCA Notification Chronology, USEPA Approval, and Additional Characterization

- July 26, 2010: On behalf of AmeriGas, EPI submitted for USEPA approval the "*PCB Remediation Work Plan Former Petrolane-Lomita Gas Plant 2851 Orange Avenue, Long Beach, California,*" dated July 26, 2010 (**Notification**) under 40 CFR 761.61(a) (self-implementing PCB cleanup).
- August 19, 2010: On behalf of AmeriGas, EPI submitted for USEPA approval the "*PCB Sampling and Analysis Plan Former Petrolane-Lomita Gas Plant . . .*" (**SAP**) dated August 19, 2010.
- September 8, 2010: On September 8, 2010, **USEPA approved the Notification and SAP** with conditions under 40 CFR 761.61(a).
- September 22, 2010: On September 22, 2010, we received **EPI's response to USEPA's September 8, 2011 conditional approval** of the Notification via the "*Response to EPA's Conditional Approval of PCB Remediation Work Plan and Sampling and Analysis Plan Former Petrolane-Lomita Gas Plant. . .*"
- September 2010 through January 2011: **Additional soil and concrete characterization** conducted at the PCS consistent with the September 8, 2010 conditions of approval.
- July 2011: On behalf of AmeriGas, EPI submitted the "*Final Risk-Based PCB Disposal Approval Application Former Petrolane-Lomita Gas Plant 2851 Orange Avenue Long Beach California EPA ID No.CAR000214189,*" dated July 11, 2011 (**Application**).

A.3 USEPA's September 8, 2010 Approval of Notification - Status of Approval Conditions

Enclosed is the status of approval conditions in the September 8, 2010 letter approving the July 26, 2010 Notification and the August 19, 2010 sampling and analysis plan. The conditions in the September 8, 2010 approval have either already been satisfied based on completion of work required in the approval or have been incorporated into the July 11, 2011 Application for completion. No other work is necessary under the September 8, 2010 conditional approval.

A.4 July 11, 2011 Risk-Based Disposal Application - USEPA Conditions of Approval

This conditional approval does not relieve AmeriGas (current property owner) and EPI from complying with all other applicable federal, state, and local regulations and permits. Departure from the approval conditions herein without prior written permission from USEPA may result in the commencement of proceedings to revoke this approval, and/or an enforcement action. Nothing in this approval resolves potential liability in connection to the original discharges of PCBs at the former Petrolane Site nor bars USEPA from imposing penalties for violations of this approval or for activities not covered under this approval.

This approval only applies to the onsite and offsite areas that are the subject of this approval. USEPA reserves the right to require additional characterization and / or cleanup of PCBs at the Site if new information during cleanup verification sampling and / or future post-cleanup activities (e.g., redevelopment) show that PCBs remain at the Site above the cleanup level of 0.22 mg/kg total PCBs (as Aroclors). USEPA will make that determination based on a statistical evaluation of the new data via USEPA's ProUCL statistical program. The Site encompasses 7.74 acres and the Petrolane Cleanup Site (PCS, defined below) is located within those 7.74 acres.

USEPA is hereby approving the Application for the Petrolane Cleanup Site as modified by the conditions of approval set forth below and the clarifications in Section B of this letter. AmeriGas and EPI must implement the Application as modified by these conditions and clarifications.

Conditions of Approval

Definition of Petrolane Cleanup Site (PCS). Consistent with the TSCA regulations in 40 CFR 761.3 the Petrolane cleanup site (PCS) encompasses the areal extent of PCB contamination including the areas where former Buildings G, K, L, and N were located and any areas in proximity (e.g., areas outside the estimated Petrolane property boundary) to the PCB contamination that may also be impacted by PCBs. USEPA is referring to the former location of Buildings G, K, L, and N and areas immediately surrounding these former building locations as Areas I, II, III, and IV, respectively.

- a. **PCB cleanup level.** The risk-based cleanup level of 0.22 mg/kg total PCBs established in USEPA's September 8, 2010 letter for soils and concrete remain in effect and it is the same cleanup level proposed in the Application. The 0.22 mg/kg concentration equates to a 1×10^{-6} health risk under an unrestricted or residential exposure scenario. The PCB cleanup level shall be achieved consistent with the Application as modified by the conditions of approval. This cleanup level is protective of human health and the environment and considers the most stringent land use (recreational) adjacent to the Petrolane property. PCB Aroclors 1248 and 1254 are the predominant Aroclors detected in soils and concrete at the PCS.
- b. **Application, Figures 3, 5, and 6.** Within 10 days after the date of this approval, AmeriGas / EPI shall submit revised Figures 3 (Proposed Excavation Building G) and 6 (Proposed Excavation Building N). Revisions shall be made consistent with Conditions A.4.c.1 and A.4.c.2. Figure 5 (Proposed Excavation Building L) shall be revised to include the north arrow.
- c. **New additional soil cleanup verification samples.** USEPA is requiring that AmeriGas and EPI collect for PCB analysis additional soil cleanup verification samples in the following areas:
 1. Area I (Building G, Application, Figure 3). The sampling grid should be reduced to a 5-foot grid in the 10-foot x 10-foot excavation area and one (1) additional soil sample shall be collected from the bottom of the excavation for PCB analysis.
 2. Area IV (Building N, Application, Figure 6). Three (3) additional soil samples shall be collected at the bottom of the excavation. The first sample shall be collected at about 5-foot centers and equidistant from sampling locations VL-T93, VN-T100, VL-S93, and VN-S100. The second sample shall be collected at about 5-foot centers and equidistant from sampling locations VL-R93, VN-R100, VL-Q93, and VN-Q100. The third sample shall be collected equidistant from and between sampling locations VN-PP90 and VN-PP75.

In addition, the sample identification codes (referenced above) VL-T93, VL-S93, VL-R93, and VL-Q93 depicted in Figure 6 are incorrect and instead should be VN-T93, VN-S93, VN-R93, and VN-Q93, respectively. Figure 6 shall be corrected to resolve this inconsistency. See Condition A.4.b above.
- d. **Soil cleanup verification; and Application, Section 8.0 (Schedule and Contingencies).** Depending on the results of laboratory-validated soil cleanup verification samples, USEPA may require additional soil

cleanup and subsequent verification sampling. In making this determination, USEPA will also consider comparisons of single or multiple exposure point concentration(s) (EPC, the 95% upper confidence limit of the mean of the soil verification data calculated via ProUCL) to the 0.22 mg/kg PCB cleanup level.

The cleanup verification data for use in the ProUCL statistical program shall be laboratory-validated soil cleanup verification data. If re-cleaning is necessary, the cleanup verification grid shall be shifted by a certain distance that enables collection of representative samples within the excavation floor and walls. Cleanup verification samples include excavation floor and wall samples, soil samples beneath the concrete-soil interface, and as applicable, soil surface samples. All soil analysis results must be corrected for percent moisture as required in 40 CFR 761.1(b)(4).

- e. **Contingencies.** Precautions (e.g., use of fences) must be taken to secure and prevent trespassers from entering the Site and the PCS during cleanup activities (including the time to obtain and review laboratory validated cleanup verification data and calculate the EPC). Excavations may need to be kept open until such data management activities are completed.

In addition, if cracks are found in concrete surfaces in Areas II, III, and IV that are beyond the location of air compressors and associated equipment and / or if visual inspection of soils beneath such concrete suggests possible soil contamination, AmeriGas and EPI shall follow the approach in the Application to test and cleanup these soils, if necessary.

- f. **Dioxin-like PCB congeners.** USEPA has reconsidered Condition C.2.h. (Dioxin-like PCB congeners in soils) in its September 8, 2010 approval letter requiring a maximum of three (3) soil samples be collected and analyzed for PCB congeners during cleanup verification sampling. USEPA is withdrawing that Condition from its September 2010 letter; and it is removing from the Application the proposal to collect two soil samples for PCB congener analysis.

Instead of the proposed limited PCB congener analysis, USEPA is requiring that hot spots (found in Areas II and III) be cleaned up to PCB levels equal to or below 0.22 mg/kg PCBs as Aroclors. The hot spots in Area II are represented by soil characterization samples PKM60:0 and PKL60:12; and in Area III by soil characterization samples PL-ZB54:0, PL-G60:18, PLJ35:0, PL-J25:0, PL-J35:0, PL1160:0, PL1150:0, PL1G60:0, PL1G58:0, PL1G55:0, PL1G50:0, PL1D60:0, PL1D58:0, PL1D54:0, PL1D50:0, SA1:6, and SA1:3.

This Condition does not replace the cleanup required in other areas of the PCS where PCBs are present.

- g. **Onsite concrete and soils for use as excavation fill and onsite soils for use as surface ground cover.**

Under 40 CFR 761.61(c)(2), USEPA will approve a cleanup method for PCB remediation waste if that method does not pose an unreasonable risk of injury to health and the environment. In light of this TSCA performance standard and the 0.22 mg/kg PCB cleanup level, onsite concrete and soils proposed for use as excavation fill and onsite soils proposed for use as ground surface cover shall be tested for PCBs. This testing shall be conducted prior to their proposed use to verify that PCBs are not present in this media above the cleanup level. AmeriGas and EPI shall use the ProUCL statistical program to calculate separate EPCs for soil and concrete prior to their proposed use to confirm that these soils and concrete do not contain PCBs

above the 0.22 mg/kg PCB cleanup level. A sufficient number of soil and concrete samples shall be collected to ensure a robust statistical evaluation via ProUCL.

Under the TSCA PCB regulations USEPA does not regulate non-PCB contaminants present at the Site. However, USEPA strongly recommends that the soils mentioned above be tested for non-PCB contaminants prior to their proposed use to verify that these soils do not exceed relevant state of California and local human health risk levels for non-PCB contaminants (e.g., arsenic, chromium) present at the Site.

- h. Statistical evaluation of data via ProUCL.** EPI shall confer with USEPA on the option it will choose to evaluate the validated soil cleanup verification data and calculate the exposure point concentration (EPC) via ProUCL. Either the data from Areas I through IV is combined into one data set and the EPC calculated based on that set (Option 1); or separate EPCs are calculated for each of Areas I through IV (Option 2). Under Option 1, the use and activity patterns for Areas I through IV are assumed to be the same; and under Option 2, the use and activity patterns are different for Areas I through IV.
- i. Application, Section 5.2 (Liquids Remediation).** “Remediation” of liquids described in Section 5.2 of the Application shall be consistent with the anti-dilution provision of TSCA in 40 CFR 761.1(b)(4) and (b)(5).
- j. Application, Section 5.3.2 (Remedial Excavation Plan).** Labeling of PCB remediation waste for disposal and disposal of this waste to an offsite permitted facility shall be in accordance with all relevant and applicable federal, state, and local regulations. Storage of any PCB remediation waste at any location at the Site or the PCS shall not exceed 30 days.
- k. Application, Section 7.0 Reporting.** AmeriGas and EPI shall confer with USEPA concerning the contents of the PCB cleanup completion report to ensure that all necessary data and information is included in the report. Records of PCB investigations and cleanup shall be kept for five (5) years in accordance with 40 CFR 761.61(a)(9). In accordance with 40 CFR 761.79(f), records of decontamination procedures implemented under 40 CFR 761.79 and as part of this approval shall be kept for three (3) years after completion of decontamination procedures.

B. Clarifications on the July 11, 2011 Application

- a. Application, Section 2.1 (Non-Porous Surfaces Characterization).** Non-porous surfaces were also sampled at Building N and according to EPI such PCB waste was disposed of at U.S. Ecology in Nevada.
- b. Application, Section 3.2 (Liquids Cleanup Level).** The 2 mg/kg level for oil is not a cleanup level and it is the level at which oil can be marketed in accordance with the requirements in 40 CFR 761.20(e) of the TSCA PCB regulations.
- c. Application, Section 5.3.3 (Excavation Equipment Decontamination).** The regulatory reference for decontamination procedures described in Section 5.3.3 of the Application are in 40 CFR 761.79(c) and not in 40 CFR 761.79(g).
- d. Application, Section 5.4 (Waste Disposal).** This clarifies the regulatory citations included in Section 5.4 of the Application. Dewatered PCB remediation waste must be disposed of in accordance with the requirements in 40 CFR 761.61(a)(5)(i)(B)(2)(ii), (B)(2)(iii), and (B)(2)(iv).

Steven A. Samuel
PCB Cleanup Former Petrolane-Lomita Gas Plant
USEPA TSCA Conditional Approval of Risk-Based Cleanup Application
Date: July 29, 2011

- e. **Application, Section 6.3.1 (Extraction Methods).** During discussion of the draft Application, USEPA mistakenly provided to EPI the wrong extraction methods for PCB-containing liquids. PCB-containing liquids should be extracted via the extraction methods recommended in USEPA Method 8082A (or latest method revision), or other suitable method required in 40 CFR Part 761, and not the extraction methods referenced in 40 CFR 761.272 ("Chemical extraction and analysis of samples").
- f. **Application, Section 6.5 (Dioxin-Like PCB Congener Analysis).** USEPA is removing Section 6.5 in its entirety from the Application.
- g. **Application, Section 7.0 (Reporting).** Records of PCB site investigations and cleanup will also be available at AmeriGas Propane, 460 North Gulph Road, King of Prussia, Pennsylvania, 19406.

We look forward to being of assistance during AmeriGas and EPI's implementation of the approved risk-based Application for cleanup of PCBs at the former Petrolane Lomita Gas Plant. Please call Carmen D. Santos at 415.972.3360 if you have any questions concerning this conditional approval.

Sincerely,

A handwritten signature in blue ink, appearing to read "Jeff Scott", is written over the typed name and title.

Jeff Scott
Director
Waste Management Division

Enclosure

Cc: Jerry Boyd, Environmental Partners, Inc.
Amy Bodek, City of Long Beach
Steve Lavinger, California DTSC
Steve Armann, USEPA R9
Carmen Santos, USEPA R9



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

Enclosure to July 29, 2011 Approval Letter

Former Petrolane Lomita Gas Plant
Risk-Based Disposal Approval Application

Introduction

This enclosure includes the September 8, 2010 approval of the (1) July 26, 2010 AmeriGas Notification and (2) August 19, 2010 sampling and analysis plan supporting the Notification. In Section C (below) of the September 8, 2010 approval, USEPA has added the status of each of the Conditions in that approval as of July 2011. The conditions in the September 8, 2011 approval have either been satisfied based on completion of work required in the approval or have been incorporated into the July 11, 2011 Application for completion. No other work is necessary under the September 8, 2010 conditional approval.

September 8, 2010

**USEPA Conditional Approval for Former Petrolane-Lomita Gas Plant Facility
Self-Implementing PCB Cleanup Under 40 CFR 761.61(a)**

- (1) *"PCB Remediation Work Plan Former Petrolane-Lomita Gas Plant 2851 Orange Avenue, Long Beach, California"* (Notification) And
- (2) *"PCB Sampling and Analysis Plan Former Petrolane-Lomita Gas Plant . . ."* (SAP)

A. Introduction

The U.S. Environmental Protection Agency Region 9 (USEPA) hereby approves with conditions (1) the *"PCB Remediation Work Plan Former Petrolane-Lomita Gas Plant 2851 Orange Avenue, Long Beach, California,"* (Notification) and (2) the *"PCB Sampling and Analysis Plan Former Petrolane-Lomita Gas Plant 2851 Orange Avenue, Long Beach, California,"* (SAP) dated July 26, 2010 and August 19, 2010, respectively, prepared by Environmental Partners Inc. (EPI) for AmeriGas Propane, L.P. This approval is in accordance with the Toxic Substances Control Act (TSCA) regulations in 40 CFR 761.61(a), self-implementing cleanup of polychlorinated biphenyls (PCBs). USEPA received the Notification and the SAP on August 5, 2010 and August 24, 2010, respectively

This approval is effective on the date of this enclosure. Section C below contains the conditions of approval.

The former 7.74-acre Petrolane-Lomita Gas Plant property (Site) is located at 2851 Orange Avenue, Long Beach, California and AmeriGas Propane, L.P. (AmeriGas) currently owns the Site.

In brief, this approval requires additional characterization of PCB contamination at the Site and cleanup of all PCBs discovered to the approved levels. If characterization sampling data for PCBs show that PCBs have

[Modified by USEPA. On July 29, 2011, USEPA added the status of conditions of approval as of July 2011.]

impacted areas beyond the property boundary, cleanup of PCBs at those offsite areas is required. This approval requires removal of PCB remediation wastes (e.g., soil, concrete, air-compressor steel pipelines) and other PCB-containing wastes (e.g., liquids) and offsite disposal of these wastes.

B. Former Petrolane-Lomita Gas Plant, Land Use, and Cleanup Plan Notification

The former Petrolane-Lomita Gas Plant, operated from the 1920s until 2007 as a natural gas processing and compression facility. In general, operations at the facility included separating natural gasoline from oil-field “wet” gas, refining natural gas, and compressing this refined gas for conveyance via pipelines. Petrolane, AmeriGas (who acquired Petrolane in 1995), and Signal Hill Petroleum (leased the property from 1994 till 2008 and ceased operations in 2000) operated the facility during different time frames. In 2007 and 2008, respectively, Signal Hill Petroleum shutdown the facility and terminated its lease.

The 7.74-acre Site is zoned as medium industrial (IM) and the future land use for this property is not fully certain. The City of Long Beach (City) owns a 45-plus-acre property that is zoned as recreational use (P) and is adjacent to the west and south boundaries of the Site. Hanson Aggregate currently has operations in a portion of the City’s property.

Briefly, the PCB cleanup activities include, among others:

- Additional soil characterization for PCBs onsite and beyond the property boundary;
- Additional concrete characterization;
- Excavation and offsite disposal of soils and concrete contaminated with PCBs above the approved PCB cleanup level of 0.22 milligram/kilogram (mg/kg) for soils and concrete;
- Removal and offsite disposal of non-porous surfaces (e.g., air compressors, compressed air receiver tanks, steel piping associated with air compressors) contaminated with PCBs;
- Removal and offsite disposal of PCB contaminated single and multiphase liquids from PCB sources such as air receiver tanks and associated piping;
- Use of onsite concrete containing PCBs at or below the USEPA-approved PCB cleanup level as fill or aggregate at the Site.

Potential sources of PCBs in soils and concrete include and may not be limited to releases of PCB-containing crankcase oil (and / or other PCB-containing lubricating oils) used in the air compressors, single (e.g., water or oil) and / or multiphase (e.g., water and oil) PCB-contaminated liquids released from air compressor equipment (e.g., such as air receiver tanks). Aerial air-compressor steel pipelines are also contaminated by PCBs due to PCB contaminated oil in the air compressors. These aerial pipelines may be another potential source of PCB contamination if these airlines released PCB contaminated condensate to soils or concrete surfaces beneath them.

Considering the dates of Site operations, crankcase oil and lubricating oils contained Aroclor 1248 and 1254 which are the predominant Aroclors detected in soil, concrete, liquids, and non-porous surfaces sampled at the Site. Potential weathering of Aroclor 1254 may also be a source of Aroclor 1248. Dioxin-like PCB congeners may be present in soils and potentially in concrete at the Site due to weathering of these Aroclors.

[Modified by USEPA. On July 29, 2011, USEPA added the status of conditions of approval as of July 2011.]

C. USEPA Conditions of Approval

This conditional approval does not relieve the owner AmeriGas from complying with all other applicable federal, state, and local regulations and permits. Departure from the approval conditions without prior written permission from USEPA may result in the commencement of proceedings to revoke this approval, and / or an enforcement action. Nothing in this approval bars USEPA from imposing penalties for violations of this approval or for violations of other applicable TSCA PCB requirements or for activities not covered under this approval.

This approval only applies to the onsite and offsite areas that are the subject of this approval. USEPA reserves the right to require additional characterization and / or cleanup of PCBs at the Site if new information during additional site characterization, cleanup verification, and / or during future post-cleanup activities (e.g., redevelopment) at the property shows that PCBs remain at the Site above the approved PCB cleanup level.

USEPA is hereby approving the AmeriGas Notification and SAP as modified by the conditions of approval. AmeriGas and EPI must implement the Notification and the SAP as modified by the approval conditions described below.

In general, PCB cleanup activities are associated with Buildings G, I, K, L and N and potential areas outside the AmeriGas property boundary.

1. Revised certification. AmeriGas has submitted a revised written, signed certification. The revision does not include the language in 40 CFR 761.61(a)(3)(i)(E). Within 15 days after the date of this approval, please resubmit the revised certification.

July 2011 Status: Completed. Also a new Certification submitted in the July 11, 2011 Application.

2. Sampling and analysis plan (SAP). The conditions established below modify the SAP. Additional characterization is necessary at Buildings G, I, K, L, and N for concrete or soil, or both media. We understand all the concrete from Building K will be removed and sent to the appropriate landfill depending on PCB concentrations in the concrete. Step out samples are necessary for Building L and such step out samples may require sampling in the adjacent property owned by the City. Additional sampling will be done for liquids (multiphase or single phase) to determine disposal method.

a. Additional site characterization sampling table and figures. Within 5 days after the date of this approval, AmeriGas shall submit to USEPA for approval a table summarizing the additional soil and concrete characterization samples that will be collected. The table must describe each location (e.g., Building K) to collect soil and concrete samples, and number, type (discrete or composites), and depth to which each sample will be collected. The necessary figures identifying the sampling locations described in the table must be submitted in tandem with the required table. Please also refer to Conditions 5 and 6.

July 2011 Status: Completed, except for very limited data gaps identified in the July 11, 2011 Application that are being addressed via the implementation of the PCB cleanup plan in that Application.

b. Cleanup verification sampling table and figures. Within 15 calendar days after receiving the analysis results for additional characterization samples, AmeriGas shall submit a table to USEPA for approval

[Modified by USEPA. On July 29, 2011, USEPA added the status of conditions of approval as of July 2011.]

summarizing the soil and cleanup verification samples to be collected. This table must provide similar information as that requested in Condition 2.a., as applicable. The necessary figures identifying the cleanup verification sampling locations described in the table must be submitted in tandem with the required table. See also Condition 2.h. (collection of discrete samples for dioxin-like PCB congener analysis) and Condition 6 (PCB characterization beyond AmeriGas property).

July 2011 Status: This condition has been met in the July 11, 2011 Application.

- c. **Section 3.2, Sampling Equipment Decontamination Procedures.** The sampling equipment decontamination procedures in Section 3.2 of the SAP must be consistent with the double wash / rinse methods for decontaminating non porous surfaces in 40 CFR 761, Subpart S.

July 2011 Status: Completed.

- d. **Section 3.3.1, Soil.** In addition to collecting soil cleanup verification samples from the bottom of the excavation, soil cleanup verification samples are also required from the sides of the excavation. The table required in Condition 2.b. must propose soil samples to be collected from the sides of the excavation.

July 2011 Status: This condition will be implemented via the cleanup plan in the July 11, 2011 Application.

- e. **Section 3.3.2, Concrete.** The SAP proposes 9-point composites to characterize the concrete for offsite disposal. If composite samples are taken for this purpose, the analysis result for composite samples must be adjusted by multiplying the result by the number of discrete samples used to prepare the composite. Either the concrete meets the 0.22 mg/kg PCB cleanup level, or if it does not, such concrete will be decontaminated until this cleanup level is reached. Alternatively, and USEPA's preferred approach, discrete samples can be collected for site characterization. An alternative sampling protocol for concrete is attached.

July 2011 Status: Completed in the vicinity of air compressors. Concrete characterization samples collected in these areas as discrete samples and not 9-point composite samples. In other concrete areas away from air compressors and compressor equipment, historic knowledge of operations was applied to determine if additional concrete sampling was necessary. However, July 29, 2011 approval of the Application is requiring that "other concrete" be tested for PCBs before its use as excavation fill.

- f. **Section 3.3.3, Liquids.** Depending on their presence in air compressor components (such as aerial compressed-air steel pipelines), single and multiphase liquids may need to be sampled to verify disposal method. Analysis detection limit must be of sufficient sensitivity to allow comparison of PCB levels in PCB-contaminated aqueous liquids to the 0.5 micrograms/liter (ug/L) PCB level for unrestricted use rather than the 3 ug/L for sewer discharge. The 0.5 ug/L discharge limit allow greater flexibility in case the POTW has a discharge requirement for PCBs lower than 3 ug/L.

July 2011 Status: Completed.

- g. **Section 5.0, Extraction and Analytical Methods.** For concrete and soil extraction, AmeriGas should utilize the Soxhlet extraction method (USEPA Method 3540C). If necessary, post extraction and pre-analysis sample cleanup (e.g., USEPA Methods 3665A [sulfuric acid], 3620C [florisil column], 3640A [GPC]) procedures should be considered if matrix interferences are suspected that could increase analytical

[Modified by USEPA. On July 29, 2011, USEPA added the status of conditions of approval as of July 2011.]

method detection limits and compromise comparisons of analytical results to cleanup and / or decontamination levels required in this approval.

July 2011 Status: This Condition was modified by subsequent USEPA correspondence to allow the use of sonic extraction via USEPA Method 3550C for characterization samples only. The Condition was completed as modified by USEPA within the context of site characterization.

- h. Dioxin-like PCB congeners in soils.** As part of Condition 2.b. AmeriGas must propose the number and location of discrete soil samples it will collect during soil cleanup verification sampling for analysis of dioxin-like PCB congeners. USEPA requests a maximum of three discrete soil samples be collected for this purpose in areas where PCBs were detected. The requested discrete samples must not be composited and can be collocated when conducting cleanup verification activities. USEPA Method 1668B (which prescribes Soxhlet extraction) or latest revision must be followed for this analysis.

July 2011 Status: This Condition required collection and analysis of a maximum of three (3) soil samples for dioxin-like PCB congeners during cleanup verification sampling. Cleanup and cleanup verification sampling was not conducted under the September 8, 2011 approval and will be conducted via the cleanup plan in the July 11, 2011 Application. Accordingly, the Application proposes collection of two (2) samples for PCB congener analysis. However, USEPA's July 29, 2011 approval of the Application no longer requires that these samples be collected and instead requires hot spot removal to levels of PCBs equal to or below 0.22 mg/kg PCBs. Also, the July 29, 2011 approval of the Application is withdrawing Condition C.2.h from the September 8, 2010 approval.

- 3. Approved PCB cleanup level.** Under 40 CFR 761.61(a)(4)(vi), USEPA has the authority to require cleanup levels for PCBs that are more stringent than those prescribed in other sections of 40 CFR 761.61(a). Accordingly, USEPA has established a soil cleanup level of 0.22 mg/kg PCBs for the Site that is both protective of human health, as attaining this level is necessary to be protective of human health. This cleanup level is in accordance with land use, which is recreational use, of adjacent areas to the Site. EPI and AmeriGas have agreed to this soil cleanup level which is USEPA's PCB regional screening level (RSL) for residential land use. This RSL is based on a 1×10^{-6} cancer risk level, and USEPA has determined that a site-specific health risk assessment does not need to be prepared for this specific PCB cleanup. This RSL is also being applied in this approval as the cleanup level for PCB-contaminated concrete surfaces at the Site. AmeriGas plans on crushing concrete with PCBs at or below this RSL and using it as fill or aggregate at the Site.

July 2011 Status: The 0.22 mg/kg PCB cleanup level was agreed to among EPI (on behalf of AmeriGas) and USEPA and will be implemented via the July 11, 2011 Application.

4. Changes to certain provisions in the Notification.

- a. Notification, Sections 3.1 and 3.3, and other applicable sections.** PCBs in water shall not exceed 3 ug /L (not 3 ug/kg) for sewer discharge in accordance with 40 CFR 761.30(u). However, the Publicly Owned Treatment Works (POTW) and / or Sanitation District with jurisdiction on sewage discharge limits in the City may have PCB discharge requirements more stringent than those in the TSCA PCB regulations. Therefore, analysis of water planned for sewer discharge should be conducted using sensitive detection limits that allow comparison of the results to the PCB unrestricted 0.5 ug/L use level for water.

[Modified by USEPA. On July 29, 2011, USEPA added the status of conditions of approval as of July 2011.]

July 2011 Status: Completed in reference to PCB remediation waste associated with characterization of the site. However, in reference to cleanup of soils and concrete, disposal issues discussed in this condition are addressed in the July 11, 2011 Application if liquids are encountered during cleanup.

- b. Notification, Section 3.1 and other applicable sections.** Bulk PCB remediation waste (soils and concrete) with PCBs below 50 mg/kg and above 0.22 mg/kg (not 1 mg/kg) shall be disposed in accordance with the requirements in 40 CFR 761.61(a)(5) which includes the option for disposal at a municipal solid waste landfill (MSWL) permitted under RCRA Subtitle D or equivalent state regulations. The Notification proposes to use the MSWL option for disposal of this bulk PCB remediation waste. This is a viable option only if such disposal also meets state or local law. For instance, California Department of Toxic Substances Control (DTSC) hazardous waste regulations may require that this bulk PCB remediation waste be disposed in a state permitted hazardous waste landfill that meets state-equivalent RCRA Subtitle C requirements instead of a permitted MSWL. AmeriGas is responsible for ensuring that it is in compliance with state and local requirements as well.

July 2011 Status: No cleanup of soils or concrete conducted under the September 8, 2010 approval. However, in reference to cleanup of soils and concrete, disposal issues discussed in this condition are addressed in the July 11, 2011 Application.

- c. Analytical method detection limit for analysis of PCBs in aqueous liquids.** Method detection limits for analysis of PCBs in aqueous liquids shall be of such sensitivity to enable comparison of the PCB analysis results for the water phase to the most stringent of the PCB concentrations allowed under federal (including TSCA), state, or local regulations for unrestricted use if the POTW PCB sewer discharge limits are lower than 3 ug/L PCBs.

July 2011 Status: This Condition is informational and a clarification.

- d. Notification, Section 3.1, Cleanup and decontamination levels.** This approval has modified the cleanup levels. The PCB cleanup level for soil and concrete is equal to or less than 0.22 mg/kg PCBs. Depending on POTW discharge limits for PCBs, the PCB decontamination level for aqueous liquids is 0.5 ug/L.

July 2011 Status: This Condition is informational and a clarification.

- 5. Additional soil and concrete characterization.** In accordance with the regulatory requirements in 40 CFR 761.61(a)(2), USEPA requires the cleanup site be adequately characterized before cleanup. The full extent of PCB contamination must be determined for soils and concrete at Buildings G, I, K, L, and N following the requirements in 40 CFR 761.61(a). Please refer to Condition 2 which requires that AmeriGas submit tables and figures summarizing additional site characterization sampling to fully delineate the extent of PCB contamination at the facility.

July 2011 Status: Completed. The July 11, 2011 Application contains characterization data summary tables and figures and identifies very limited data gaps that will be addressed via the cleanup plan in the Application. Also, see status for Condition C.2.a. above.

- 6. Soil characterization beyond the AmeriGas property boundary.** Soil characterization samples for Building L indicate there is a potential for PCB impacts to the neighboring property owned by the City. Soil

[Modified by USEPA. On July 29, 2011, USEPA added the status of conditions of approval as of July 2011.]

samples to confirm the extent of contamination beyond the Site boundary must be proposed in the tables and figures required in Conditions 2.a. and 2.b. (if cleanup and cleanup verification samples are deemed necessary beyond the Site boundary).

July 2011 Status: Characterization of soils adjacent to an “approximate” Petrolane property boundary (in USEPA’s approvals considered to be offsite areas and part of the cleanup site) was completed to the east of Buildings L and N. However, in a few offsite sampling locations step out samples were not possible since a step out would be located right on Orange Avenue. In addition, two concrete walls adjacent to the boundary of the Site toward the east and south of Building N (Area IV) may present difficulties during soil cleanup via implementation of the July 11, 2011 Application.

7. Disposal of non-porous surfaces (e.g., air compressors, compressed air pipelines) contaminated with PCBs. Disposal of non-porous surfaces must be in accordance with 40 CFR 761.61(a) requirements.

July 2011 Status: According to EPI disposal of non-porous surfaces encountered during site characterization have been completed. The cleanup completion report required in the July 11, 2011 Application will include offsite disposal documentation for all wastes removed from the site and disposed offsite.

8. Multi-phase PCB containing and PCB-contaminated liquids. Sampling and disposal of multi-phase liquids containing or contaminated with PCBs must be consistent with the requirements in 40 CFR 761.1(b)(4)(iv) and 40 CFR 761.1(b)(5).

July 2011 Status: We understand that multiphase liquids were not encountered during characterization sampling and demolition of structures and gas plant equipment at the cleanup site. The July 11, 2011 Application addresses multiphase liquids in case these are encountered during the PCB cleanup.

9. Demolition of structures at the site, removal of PCB remediation wastes, soil cleanup. Within two days after the date of this approval, AmeriGas must submit to USEPA a description of the measures it will take to prevent additional PCB contamination at the site during demolition activities. Additional characterization sampling will be conducted for PCBs to determine the extent of contamination and it is not clear if demolition has been completed in the areas targeted for additional site characterization. If PCB characterization sampling occurs before demolition and if demolition activities cause additional PCB contamination, such additional contamination (if it occurs) will not be captured by site characterization sampling efforts. Cleanup verification sampling is not intended for site characterization. Demolition activities must not cause or serve as a source of PCB contamination at the site. We agree with excavation and cleanup verification sampling occurring post-demolition.

July 2011 Status: Completed except for some concrete floors that remain in place and will be demolished in tandem with soil cleanup activities to be conducted consistent with the July 11, 2011 Application. Also refer Condition A.4.g in the July 29, 2011 approval of the Application.

10. Natural gas pipelines. Within 30 days after the date of this approval AmeriGas must submit to USEPA written documentation verifying that natural gas pipelines at the site are not contaminated with PCBs. Among other information that AmeriGas determines necessary to be included in that verification, USEPA requests that results of standard wipe tests conducted in the interior of these pipelines be submitted. If sampling results are

USEPA Conditional Approval Under 40 CFR 761.61(a)
Former Petrolane-Lomita Gas Plant, Long Beach, CA
Date: September 8, 2010

[Modified by USEPA. On July 29, 2011, USEPA added the status of conditions of approval as of July 2011.]

not available, USEPA requests that standard wipe tests be done if natural gas pipelines are accessible for testing. The regulations in 40 CFR 761 Subpart M contain sampling procedures for natural gas pipelines. Analysis of oil samples collected from gas compressors 11 and 12 in Building L show that PCBs were not detected at 1.4 ppm. However, routine maintenance of gas compressors may have included changing the compressors' crankcase oil which may have resulted in serial dilution of PCBs if PCBs were present in the oil.

July 2011 Status: Completed.

D. Not Covered by this Approval

USEPA acknowledges that a Health and Safety Plan (HSP) is included in the SAP. This approval does not cover approval of the HSP.